

Docket No. DP-310121

1. A controlled suspension system for use between a truck cab or the like and an associated vehicle frame comprising:
 - (a) a strut module adapted to be attached at one end to a truck cab and at an opposite end to an associated vehicle frame, said strut module including an air sleeve capable of being selectively pressurized;
 - (b) said strut module including a height sensor for measuring a distance between said truck cab and said associated frame and generating a signal indicating thereof; and
 - (c) a controller for receiving said signal from said height sensor and selectively pressurizing said air sleeve;
 - (d) whereby said distance between said cab and said associated frame is maintained within desired limits by selective pressurization of said air sleeve.
2. The suspension system of claim 1 wherein said strut module includes a strut having an inner tube, an outer tube concentric with said inner tube and a bearing sleeve positioned between said inner tube and said outer tube, whereby said bearing sleeve distributes a bending moment applied to ends of said strut.
3. The suspension system of claim 2 wherein said air sleeve is connected to said inner tube and said outer tube.
4. The suspension system of claim 3 wherein said air sleeve is concentric with said inner tube.
5. The suspension system of claim 4 wherein said air sleeve includes a flexible portion connected to said outer tube.

Docket No. DP-310121

6. The suspension system of claim 5 wherein said air sleeve includes a relatively rigid portion connection to said inner tube.
7. The suspension system of claim 6 wherein said relatively rigid portion is concentric with said inner tube.
8. The suspension of claim 2 wherein said relatively rigid portion, said flexible portion, said inner tube and said outer tube define a first air chamber of said air sleeve; and said air sleeve includes a seal adapter that, together with said inner tube and said outer tube, defines a second air chamber.
9. The suspension system of claim 2 wherein said strut module includes a three-point connection adapted to interconnect said cab and said frame, whereby said three-point connection resists relative lateral movement between said cab and said frame.
10. The suspension of claim 1 wherein said frame includes a transverse frame element and said strut is adapted to be attached thereto.
11. The suspension system of claim 10 wherein said strut is adapted to be positioned at substantially a midpoint of said transverse frame element.
12. The suspension system of claim 11 wherein said strut is adapted to be mounted on a downwardly-depending flange of said cab.
13. The suspension system of claim 1 wherein said controller is mounted on said strut.
14. The suspension system of claim 1 wherein said strut module includes mounting flange adapted to make a two-point connection to one of said cab or said frame; and said controller is mounted on said mounting flange.

Docket No. DP-310121

15. The suspension system of claim 14 wherein said strut module includes a housing mounted on said mounting flange; and said housing encloses said controller and said height sensor.
16. The suspension system of claim 15 wherein said height sensor includes a link connected to said strut module adjacent an end opposite said mounting flange.
17. The suspension system of claim 16 wherein said end opposite said mounting flange is adapted to make a single point connection that, together with said two-point connection, makes a three-point connection between said cab and said frame, thereby resisting relative lateral movement between said cab and said frame.
18. The suspension system of claim 1 wherein said strut module includes an MR strut and said controller is connected to said MR strut to vary the damping characteristics thereof.
19. A controlled suspension system for use between a truck cab or the like and an associated vehicle frame comprising:
 - (a) a strut module adapted to be attached at one end to a truck cab and at an opposite end to an associated frame, said strut including a three-point connection adapted to interconnect said cab and said frame, whereby said three-point connection resists relative lateral movement between said cab and said frame;
 - (b) a height sensor mounted on said strut module for measuring a distance therebetween and generating a signal indicative thereof; and
 - (c) a controller for receiving said signal from said height sensor and selectively pressurizing said strut module;

Docket No. DP-310121

(d) whereby said distance between said cab and said associated frame is maintained within desired limits by selective pressurization of said strut module by said controller.

20. The suspension system of claim 19 wherein said frame includes a transverse frame element and said strut module is adapted to be attached thereto.

21. The suspension system of claim 20 wherein said strut includes a mounting flange adjacent one end thereof; said mounting flange having a two-point connection; said two-point connection being a component of said three-point connection.

22. The suspension system of claim 21 wherein said two-point connection is adapted to be attached to one of said cab and said frame.

23. The suspension system of claim 19 wherein said controller is mounted on said strut module.

24. The suspension system of claim 19 wherein said strut module includes a housing containing said controller and said height sensor.

25. The suspension system of claim 24 wherein said housing is positioned adjacent an end of said strut module; and said height sensor includes a link extending from said housing and attached adjacent to an opposite end of said strut module.

26. The suspension system of claim 25 wherein said strut module includes a strut having an inner tube, an outer tube and a bearing sleeve interconnecting said inner and outer tubes; and said link is attached to said inner tube.

Docket No. DP-310121

27. The suspension system of claim 19 wherein said strut module includes an MR strut and said controller is connected to said MR strut to vary the damping characteristics thereof.
28. The suspension system of claim 19 wherein said height sensor is integral with said controller.